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PORTA, D EXAMINER

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ART UNIT	PAPER NUMBER
2506	5

DATE MAILED: 09/17/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined. ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire THREE (3) month(s), --- days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Notice re Patent Drawing, PTO-948.
3. ☒ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claim(s) 57-118 are pending in the application.
   Of the above, claim(s) _____ is withdrawn from consideration.
2. ☐ Claim(s) _____ has been canceled.
3. ☐ Claim(s) _____ is allowed.
4. ☒ Claim(s) 57-118 are rejected.
5. ☒ Claim(s) 108-110 are objected to.
6. ☐ Claim(s) _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawing(s) under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawing(s) are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction(s), filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
12. ☐ Acknowledgment is made of the claim for priority under 35 USC 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

Claim Objections

1. Claims 108-110 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

2. Claims 57-90, 93, 114, and 116 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In claim 57, for example, "harmless plastic, plastic-like, or other objects" is vague and indefinite. In claim 93, "plastic explosives, other explosives, drugs, and money" should be -- explosives, drugs, and money-- as the use of "plastic explosives" and "other explosives" obviously includes ALL explosives. If applicant intends to include all explosives, such should be stated. Other of the rejected claims include the above referenced language, either explicitly or by dependence on such a claim. In claim 83, "said 'no X-ray flux' data" lacks antecedent basis. This claim should apparently depend from claim 82 instead of claim 81.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 91, 92, 112, and 113 are rejected under 35 U.S.C. § 102(e) as being anticipated by Tsutsui et al. Tsutsui et al. disclose irradiating a package on a conveyor (see figure 5) with X-rays having at least two energies, a stationary detector providing transmission data to a computer, calculating the "Z" of the material of interest by comparing the transmission data through the structure to that of areas around the structure to eliminate "background" information, and automatically indicating the presence of the specific material. Tsutsui et al. eliminate the "background" by logarithmically combining the data from the two energies with a varying weighting factor until the image of the of the desired article disappears. The final "coefficient" when the image disappears corresponds to the contrast ratio of the structure which identifies the material of the structure.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 57-66, 73-77, 93, and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. Tsutsui et al. disclose all of the elements of applicant's claimed invention except for the use of the system for identifying explosives or contraband in particular. As seen in figure 5 of Tsutsui et al., this disclosure is applicable to package inspection. It would have been obvious to one of ordinary skill in the art to employ the method and device of Tsutsui et al. in a baggage inspection environment to detect plastic explosives or other contraband motivated by the well known need to detect such objects in security environments.

6. Claims 67, 82-85, 88/83, 89/83, and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. as applied to claims 57, 65, and 112 above, and further in view of Donges et al. (4,788,704). Tsutsui et al. disclose or suggest all of the elements of applicant's claimed invention except for the "no X-ray flux" data "offset" correction. Donges et al. appear to

only measure data when the X-ray source is turned off one time at the beginning of a scan, but it would have been obvious to one of ordinary skill in the art to take measurements more often to achieve a higher accuracy in the correction.

7. Claims 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. as applied to claim 57 above, and further in view of Alverez et al. Tsutsui et al. disclose or suggest all of the elements of applicant's claimed invention except for the substitution of one source and two detectors for the one source at two energies and one detector. Alverez et al. teach that these are well known equivalent means of obtaining dual energy data in an X-ray system (see figures 2 and 3). It would have been obvious to one of ordinary skill in the art to modify the invention of Tsutsui et al. by the teaching of Alverez et al. motivated by the benefit of reducing the requirements on the X-ray source.

8. Claims 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. and Alverez et al. as applied to claim 68 above, and further in view of Donges et al. (4,788,704). Tsutsui et al. and Alverez et al. combine to suggest all of the elements of applicant's claimed invention except for the use of "no X-ray flux" data for offset correction. As stated above, Donges et al. teach that the use of data taken from detectors when the source is off is useful in correcting detector offset errors. It would have been obvious to one of ordinary skill in the art to employ offset correction in the device of Tsutsui et al. as modified by Alverez motivated by the benefits to accuracy inherent in error correction.

9. Claims 86, 87, 88/86, and 89/86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. and Donges et al. as applied to claim 82 above, and further in view of Alverez et al. Tsutsui et al. and Donges et al. combine to suggest all of the elements of applicant's claimed invention except for the substitution of two detectors for the single detector of Tsutsui et al. Alverez et al. teach that these are well known equivalents in the art and one of ordinary skill in the art would have been motivated to make the substitution by the benefits to decreased X-ray source control requirements.

Double Patenting

10. The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 57-77, 82-89, 91-93, 112-114, and 116 are rejected under the judicially created doctrine of double patenting over claims 1-63 of U. S. Patent No. 5,319,547 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: All of the elements of applicant's claims are found in the patented claims, but the instant claims do not cover the particular mathematical calculations set forth in the patented claims. In other words, these claims are merely broader than those already patented.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

12. Claims 57-118 are rejected under the judicially created doctrine of double patenting over claims 1-73 of U. S. Patent No. 5,490,218 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: All of the elements of applicant's claims are found in the patented claims, but the instant claims do not cover the particular mathematical calculations set forth in the patented claims. In other words, these claims are merely broader than those already patented.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application

which matured into a patent. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Peschmann et al. and Pongratz et al. disclose combining CT scanning and transmission data analysis in baggage inspection. Both of these references were filed after the filing date of applicant's "grandparent" patent application.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner David P. Porta whose telephone number is (703) 308-4852.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

The Art Unit 2506 Facsimile number is (703) 308-7723. This number is for Art Unit 2506 papers only. Applicant is reminded that all "Draft" copies of correspondences should clearly be labelled as such.

DAVID P. PORTA

PRIMARY EXAMINER

GROUP 2500

dpp
September 12, 1996